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10/677,398	10/01/2003	Boaz Ben-Zvi	200308873-1	8875

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EXAMINER	
BATAILLE, PIERRE MICHE	

ART UNIT	PAPER NUMBER
2186	

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



<b>Office Action Summary</b>	<b>Application No.</b> 10/677,398	<b>Applicant(s)</b> BEN-ZVI, BOAZ	
	<b>Examiner</b> Pierre-Michel Bataille	<b>Art Unit</b> 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |



## **DETAILED ACTION**

### ***Response to Amendment***

1. The present Office Action is taken in response to Applicant's communication filed May 18, 2007 responding to Final rejection dated September 22, 2006. Applicant's amendment and/or arguments have been considered with the results that follow.
2. Claims 1-12 are pending in the application under prosecution.

### ***Response to Arguments***

3. Applicant's arguments, with respect to rejection under -12 have been fully considered and are persuasive. The rejection of claims 1-12 has been withdrawn. The finality of on claims 1-12 is withdrawn in view of Applicant's arguments and in view of the newly discovered reference(s). New grounds of rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, 5, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,070,170 (Friske et al).



With respect to claim 1, Friske teaches an apparatus, comprising: a non-blocking grouping mechanism that groups entries of data, and returns the groups of entries of data substantially concurrently with processing following grouping of data *[system to reorganize a database that does not prevent other processes from accessing the database while the reorganization is in progress (Col. 3, Lines 2-4); non-blocking drain allowing reorganization process to lock and queue while earlier-processes--processes which requested database access before the reorganization process--to complete their routine and at the same time, database access by later-processes, that is, processes requesting database access after the reorganization process, is not impeded by the non-blocking drain (Col. 3, Lines 29-36)]*.

With respect to claim 4, Friske teaches the primary memory includes a primary Random Access Memory (RAM).

With respect to claim 5, Friske teaches method of providing concurrent grouping, comprising: receiving input entries of data; filtering out recurring entries of data from the input entries of data; and returning distinct entries of data from the input entries of data to the user substantially concurrently with the receiving input entries of data *[system to reorganize a database that does not prevent other processes from accessing the database while the reorganization is in progress (Col. 3, Lines 2-4); non-blocking drain allowing reorganization process to lock and queue while earlier-processes--processes which requested database access before the reorganization process--to complete their routine and at the same time, database access by later-processes, that is, processes requesting database access after the reorganization process, is not impeded by the non-blocking drain (Col. 3, Lines 29-36)]*.



With respect to claim 8, Friske teaches returning entries of data in a non-blocking fashion concurrently with other entries of data being processed *[system to reorganize a database that does not prevent other processes from accessing the database while the reorganization is in progress (Col. 3, Lines 2-4); non-blocking drain allowing reorganization process to lock and queue while earlier-processes--processes which requested database access before the reorganization process--to complete their routine and at the same time, database access by later-processes, that is, processes requesting database access after the reorganization process, is not impeded by the non-blocking drain (Col. 3, Lines 29-36)]*.

With respect to claim 9, Friske teaches method of grouping entries of data, comprising: prior to a potential overflow within a primary memory, grouping each input row of data and returning the data in a non-blocking fashion; and in case of the overflow, ensuring that the user eventually receives the correct remaining rows *[system to reorganize a database that does not prevent other processes from accessing the database while the reorganization is in progress (Col. 3, Lines 2-4); non-blocking drain allowing reorganization process to lock and queue while earlier-processes--processes which requested database access before the reorganization process--to complete their routine and at the same time, database access by later-processes, that is, processes requesting database access after the reorganization process, is not impeded by the non-blocking drain (Col. 3, Lines 29-36)]*.



***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 6-7, and 10-11 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,070,170 (Friske et al) in view of US 5,511,190 (Sharma et al).

With respect to claims 2, 7, and 10, Friske teaches the invention as claimed, system to reorganize a database that does not prevent other processes from accessing the database while the reorganization is in progress (Col. 3, Lines 2-4); non-blocking drain allowing reorganization process to lock and queue while earlier-processes--processes which requested database access before the reorganization process--to complete their routine and at the same time, database access by later-processes, that is, processes requesting database access after the reorganization process, is not impeded by the non-blocking drain (Col. 3, Lines 29-36).

Friske, however, fails to specifically teach an overflow mechanism by which data that includes the groups of entries of data that were grouped by the non-blocking grouping mechanism can be written from a primary memory to a secondary memory when the primary memory reaches an overflow condition. However, Sharma teaches structured query language (SQL) grouping and aggregation system and method allowing groupings and aggregates to be generated on the fly through the use of partial



aggregates maintained in primary memory where, in one overflow procedure, raw data from groups that cannot be aggregated in primary memory are buffered then written to the overflow disk (Abstract; Fig. 2, 5A-5C, 6; Col. 3, Lines 8-45). Therefore, it would have been obvious to one of ordinary skill in the art, having both teachings before him at the time of the invention to combine the aggregate grouping of Sharma with the non-blocking process by Friske because the result would have allowed groups and aggregates to be generated for as many groups as can be maintained in primary memory, while various overflow procedures are provided for buffering ungrouped data and writing that data to an overflow disk file for later processing.

With respect to claims 6 and 11, Friske teaches memory overflow by selected portions of the entries of data in a primary memory being flushed to a secondary memory to alleviate memory pressure. However, Sharma teaches structured query language (SQL) grouping and aggregation system and method allowing groupings and aggregates to be generated on the fly through the use of partial aggregates maintained in primary memory where, in one overflow procedure, ungroupable raw data is partially aggregated in an output buffer maintained in primary memory before being written to the overflow file maintained in secondary memory (Abstract; Fig. 2, 5A-5C, 6; Col. 3, Lines 8-45). Therefore, it would have been obvious to one of ordinary skill in the art, having both teachings before him at the time of the invention to combine the aggregate grouping of Sharma with the non-blocking process by Friske because the result would have allowed groups and aggregates to be generated for as many groups as can be



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maintained in primary memory, while various overflow procedures are provided for buffering ungrouped data and writing that data to an overflow disk file for later processing.

***Allowable Subject Matter***

8. Claim 12 is allowed.

9. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,115,715 (Traversat et al) teaching transaction management in a configuration database where in nonblocking transactions the system attempts to perform other operations on other parts of the client schema while placing thread that needs locked entry in a queue.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Michel Bataille whose telephone number is (571) 272-4178. The examiner can normally be reached on Mon, Tue-Fri (8:00A to 5:30P).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Pierre-Michel Bataille  
Primary Examiner  
Art Unit 2186